

Claims

1. Projector arrangement, comprising:

- a projector unit (3) having an objective unit (4) for optically projecting images, in particular on an external screen (20), and
- an objective cover unit (6) for covering a light exit portion (4e) or light exit surface (4e) of said objective unit (4) in a standby, pause, non-projecting mode and/or non-operation mode of said projector arrangement (1),

characterized in

that said objective cover unit (6) is adapted to serve and/or to function as a support or bearing unit (8) for supporting said projector unit (3), in particular on an external operation surface (100), in an operation mode of said projector arrangement (1).

2. Projector arrangement according to claim 1,

wherein said objective cover unit (6) and/or said projector unit (3) are formed and/or are adapted to allow a plurality of locations (P2, P3, P4) and/or portions (P2, P3, P4) of or on said projector unit (3) to be rested on said objective cover unit (6) when said projector unit (3) is supported by said objective cover unit (6) as said support or bearing unit (8) in said operation mode of said projector arrangement (1).

3. Projector arrangement according to claim 2,

wherein each of said locations (P2, P3, P4) and/or portions (P2, P3, P4) of or on said projector unit (3) are chosen to be assigned to and/or to realize a distinct position and/or orientation of said projector arrangement (1) and in particular of its objective unit (4) when said projector unit (3) is supported by said objective cover unit (6) as said support or bearing unit (8) in said operation mode of said projector arrangement (1).

4. Projector arrangement,

comprising a projector unit (3) having an objective unit (4) for optically projecting images, in particular on an external screen (20),

characterized in

- that a surface region (2a) is provided having a plurality of locations (P2, P3, P4) and/or portions (P2, P3, P4) being adapted for directly or indirectly resting on, in particular an external operation or working surface (100), in an operation mode or projecting mode of said projector arrangement (1) and

- that each of said locations (P2, P3, P4) and/or portions (P2, P3, P4) of or on said projector unit (3) are chosen to be assigned to and/or to realize a distinct position and/or orientation of said projector arrangement (1) and in particular of its objective unit (4) in said operation mode or projecting mode of said projector arrangement (1).

5. Projector arrangement according to claim 4,

wherein fixing means is/are provided for detachably fixing said projector arrangement (1) and in particular said projector unit (3) in each of said locations (P2, P3, P4) and/or portions (P2, P3, P4) and in particular in each of said distinct positions and/or orientations, when resting in or on a respective location (P2, P3, P4) and/or portion (P2, P3, P4).

6. Projector arrangement according to any one of the preceding claims 4 or 5,

- wherein an objective cover unit (6) for covering a light exit portion (4e) or light exit surface (4e) of said objective unit (4) in a standby, pause, non-projecting mode and/or non-operation mode of said projector arrangement (1), and

- wherein that said objective cover unit (6) is adapted to serve and/or to function as a support or bearing unit (8) for supporting said projector unit (3) and/or as said fixing means (8), in particular on an external operation surface (100), in an operation mode of said projector arrangement (1).

7. Projector arrangement according to any one of the preceding claims 2 to 6,

wherein each of said locations (P2, P3, P4) and/or portions (P2, P3, P4) of or on said projector unit (3) are chosen to be assigned to and/or to realize distinct - vertical and/or horizontal - projection angles (α_2 , α_3 , α_4) or inclination angles (α_2 , α_3 , α_4) of said projector arrangement (1) and in particular of its objective unit (4) when said projector unit (3) is supported by said objective cover unit (6) as said support or bearing unit (8) in said operation mode of said projector arrangement (1) and/or in particular with respect to a horizontal plane of an external operating surface (100) and/or with respect to said external screen (20).

8. Projector arrangement according to any one of the preceding claims 2 to 7,

wherein said objective cover unit (6) and/or said projector unit (3) are formed and/or are adapted to provide a continuously distributed plurality of said locations/portions (P2, P3, P4), positions/orientations and/or projection angles (α_2 , α_3 , α_4) or inclination angles (α_2 , α_3 , α_4).

9. Projector arrangement according to any one of the preceding claims,
wherein said projector unit (3) comprises a base portion (2) having a surface
(2a), in particular as said surface region (2a) of said projector unit, at least a
part of which being continuously and/or smoothly curved in an at least local
convex manner,
- in particular so as to realize said plurality of said locations/portions (P2,
P3, P4), positions/orientations and/or projection angles (α_2 , α_3 , α_4) or in-
clination angles (α_2 , α_3 , α_4), in particular on its surface (2a), and/or
 - in particular so as to enable in said operation mode of said projector ar-
rangement (1) a resting or supporting of said projector unit (3) on said
support or bearing unit (8).
10. Projector arrangement according to claim 9,
wherein said base portion (2) has at least in part - when cross sectionally
viewed - an at least partial circular, elliptical, and/or parabolic shape.
11. Projector arrangement according to any one of the preceding claims 9 or 10,
wherein said base portion (2) has at least in part a spherical, ellipsoidal,
paraboloidal and/or cylindrical shape.
12. Projector arrangement according to any one of the preceding claims 9 to 11,
wherein said base portion (2) is essentially formed as a hemisphere or hemi-
cylinder or as a part thereof.
13. Projector arrangement according to any one of the preceding claims,
wherein said objective cover unit (6) is formed as a detachable cap for said
objective unit (4).
14. Projector arrangement according to any one of the preceding claims,
wherein said objective cover unit (6) comprises:
- a first or inner base surface (6a) adapted to face said light exit portion (4e)
or light exit surface (4e) of said objective unit (4) in said standby, pause,
non-projecting and/or non-operating mode and to face said projector unit
(3) and in particular said base portion (2) further in particular its surface
(2a) in said operation mode of said projector arrangement (1), and
 - a second or outer base surface (6b) situated opposite said first or inner
base surface (6a) and therefore situated opposite from said light exit por-
tion or said light exit surface (4e) of said objective unit (4) in said

standby, pause, non-projecting, and/or non-operating mode and opposite said base portion (2) and/or said surface (2a) thereof in said operation mode and which is in particular adapted to face and rest on said external operating surface (100) in said operation mode.

5 **15.** Projector arrangement according to claim 14,

 wherein said objective cover unit (6) comprises a rim portion (6r), in particular provided on the periphery of said first or inner base surface (6o) and projecting away from said first or inner base surface (6o), in particular essentially in the direction of the inner base surface's (6o) normal (n6), thereby forming abutment surfaces (6u) adapted to support or to have rested on said projector unit (3), in particular said base portion (2) and in particular its surface (2a) in said operation mode of said projector arrangement (1).

15 **16.** Projector arrangement according to any one of the preceding claims,

 wherein said objective cover unit (6) as said support or bearing unit (8) and in particular its rim portion (6r) and/or said abutment surfaces (6u) and/or said projector unit (6r) and in particular its base portion (2) are formed and adapted to realized one or an arbitrary combination or plurality of the following aspects:

- cooperation and/or engaging of respective shapes and/or surfaces,
- frictional interaction forces between each other,
- stable and/or equilibrated support of said projector unit.

25 **17.** Projector arrangement according to any one of the preceding claims,

 wherein said projector unit (3) and in particular its base portion (2) have a shape and/or a mass distribution so as to ensure to be supported by said support or bearing unit (8) in mass or gravitational equilibrium.

30 **18.** Projector arrangement according to any one of the preceding claims,

 wherein said objective cover unit (6) and in particular its rim portion (6r) comprise position holding or fixing elements for ensuring an essentially fixed positioning of the supported and rested projector unit (3) in said operation mode.